

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
22 August 2002 (22.08.2002)

PCT

(10) International Publication Number  
WO 02/065184 A3

(51) International Patent Classification<sup>7</sup>: G02B 27/12, G02F 1/1335, G02B 27/09, B41J 2/45, G02F 1/13357

(21) International Application Number: PCT/US02/04742

(22) International Filing Date: 12 February 2002 (12.02.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
09/782,387 12 February 2001 (12.02.2001) US

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.

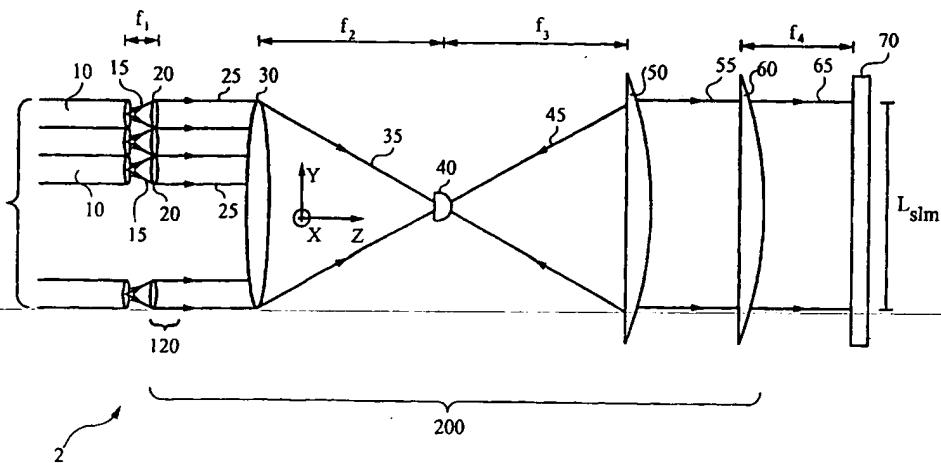
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:  
— with international search report

(88) Date of publication of the international search report: 20 March 2003

[Continued on next page]

(54) Title: AN ILLUMINATION SYSTEM FOR ONE-DIMENSIONAL SPATIAL LIGHT MODULATORS EMPLOYING MULTIPLE LIGHT SOURCES



WO 02/065184 A3

(57) Abstract: The present invention is directed to illuminating a one-dimensional spatial light modulator (70) using an illumination system employing multiple light sources (10). The illumination system comprises a parallel array of light sources which provides a plurality of light outputs to an optical train (200). The optical train effectively combines the light sources into a single light source. The single light source provides a single light output for uniformly illuminating the spatial light modulator. The optical train includes a first optical train for receiving the light outputs from each light source, magnifying each light output, and overlaying each of the light outputs to form a single real magnified image. A mode conversion lens receives the single real magnified image, converts a mode profile of the single real magnified image into a top hat mode profile, and outputs a diverging light beam with a top hat mode profile. A second optical train shapes the light beam into an appropriate spatial geometry in such a manner that the light beam effectively illuminates the entire spatial light modulator, and directs the light beam onto the spatial modulator.

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G02B27/12 G02F1/1335 G02B27/09 B41J2/45 G02F1/13357

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G02B B41J G02F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 923 475 A (KESSLER DAVID ET AL) 13 July 1999 (1999-07-13)  column 3, line 46 -column 5, line 40; figure 1 column 6, line 54 -column 7, line 20 column 11, line 1 - line 26	1,2,4-9, 11, 13-15, 17-22
X	EP 1 040 927 A (EASTMAN KODAK CO) 4 October 2000 (2000-10-04) page 3, line 16 - line 23 page 4, line 5 - line 35; figures 1,2	1-3
X	EP 1 003 071 A (EASTMAN KODAK CO) 24 May 2000 (2000-05-24) column 8; figure 1A	1,3,13, 18,22

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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Date of the actual completion of the international search

25 November 2002

Date of mailing of the international search report

02/12/2002

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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